

NJDOT Bureau of Research  
**QUARTERLY PROGRESS REPORT**

Project Title:	Worker Safety Issues of WiFi Devices	
RFP NUMBER: 7830811	NJDOT RESEARCH PROJECT MANAGER: Ed Kondrath	
TASK ORDER NUMBER: 22	PRINCIPAL INVESTIGATOR: Christopher Titze	
Project Starting Date: 07/26/2013 Project Ending Date: 10/25/2013	Period Starting Date: 07/01/2013 Period Ending Date: 09/30/2013	

Task	% of Total Project Budget	Total Budget	% of Task This Quarter	Cost This Quarter	% of Task to Date	Total Cost to Date
1. Literature Review	55%	\$8,100	100%	\$8,100	100%	\$8,100
2. Final Report	45%	\$6,640	37%	\$2,435	37%	\$2,435
<b>TOTAL</b>	<b>100%</b>	<b>\$14,740</b>	<b>72%</b>	<b>\$10,535</b>	<b>72%</b>	<b>\$10,535</b>

**Project Objectives:**

The objectives of this project are to conduct a literature review of studies to gather information on the health and safety effects related to the use of various Wi-Fi devices and RFEMF exposure. This review will also include background information on Wi-Fi devices more generally, what they are and how they are used in transportation. A review of findings and an outline of potential concerns, issues, and other information relevant to worker health and safety will be created upon the completion of the project.

**Project Abstract:**

Electromagnetic fields are present everywhere. Besides natural sources, man-made sources include X-rays, power sockets, and cellular phones. The World Health Organization has classified radiofrequency electromagnetic radiation (RF-EMF) as a possible group 2b carcinogen. This group consists of possible carcinogens that carry limited evidence of risk but need to be monitored. The exposure of the general public to this from cellular phones, wireless networks, radio broadcasting, etc. has been long discussed and studied. NJDOT presently uses Bluetooth devices that emit RF-EMF. This research will address the effect this exposure on workers and any potential concerns especially as they relate to the transportation sector.

## **1. Progress this Quarter by Task**

Task 1:

- Identified relevant sources related to the health and safety effects of radiofrequency electromagnetic (RF-EMF) fields
- Completed literature review of U.S. and international studies regarding the health and safety effects of Bluetooth device. Researched DOT experiences using Bluetooth and related devices as well as the specifications and details regarding the BlueTOAD traffic monitoring system purchased by NJDOT.

Task 2:

- Began developing Draft Report detailing literature review findings, outlining potential concerns and issues relevant to worker health and safety, describing Bluetooth device(s) purchased by NJDOT, other DOT experiences, and the types of activities workers partake in that may result in exposure.

## **2. Proposed activities for next quarter by task**

Task 1:

- None.

Task 2:

- Finalize draft report detailing literature review findings and potential concerns and issues related to worker health and safety.
- Develop one-page Technical Brief providing overview and summary of the issues addressed as well as findings from the Final Report.
- Complete Final Report and Technical Brief

## **3. List of deliverables provided in this quarter by task (product date):**

Task 1:

- Draft Summary of research reviewed
- Final Summary of research reviewed

Task 2:

- None

## **4. Progress on Implementation and Training Activities:**

- No work on implementation or training in this period

## **5. Problems/Proposed Solutions:**

- No problems to report during this period.

Total Project Budget	\$14,740.00
<b>Contract Amount:</b>	\$14,740.00
Total Project Expenditure to date	\$10,535.00
% of Total Project Budget Expended	72%